AOB Seminar

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所　　属: UC Berkeley

開催日時: 2018 年 8 月 10 日(金)　10:00-11:30

場　　所: 理学研究科 物理 A 棟 地物第二講義室(A412)

講演題目&要旨:

Aseismic Transform Fault Slip at the Mendocino Triple Junction From Characteristically Repeating Earthquakes

I will give a talk about our recent work for repeating earthquakes, led by Kathryn Materna. The Mendocino Triple Junction (MTJ), at the northern terminus of the San Andreas Fault system, is an actively deforming plate boundary region with poorly constrained estimates of seismic coupling on most offshore fault surfaces. Characteristically repeating earthquakes provide spatial and temporal descriptions of aseismic creep at the MTJ, including on the oceanic transform Mendocino Fault Zone (MFZ) as it subducts beneath North America. Using a dataset of earthquakes from 2008 to 2017, we find that the easternmost segment of the MFZ displays creep during this period at about 65% of the long-term slip rate. We also find creep at slower rates on the shallower strike-slip interface between the Pacific plate and the North American accretionary wedge, as well as on a fault that accommodates Gorda subplate internal deformation. After a nearby M5.7 earthquake in 2015, we observe a possible decrease in aseismic slip on the near-shore MFZ that lasts from 2015 to at least early 2017.